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ABSTRACT

This reference document for public school facility designers addresses arts education programs and the facilities that support them. Some sections focus on concepts and features common to most or all arts education subject areas, such as sound management, acoustical design, teacher workstations, and performance facilities. Other sections describe requirements peculiar to the individual areas of dance, music, theater arts, and visual arts. Concluding sections provide floor plans that reflect spaces ideal for maximum implementation of the standard state course of study in areas of general and instrumental music, dance, and theater arts. Additional resources are listed. (GR)

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dance
music

Arts Education Facilities Planner

theatre arts
visual arts

ED 445 502

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Grades K-8

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ARTS EDUCATION FACILITIES PLANNER FOR GRADES K-8

FOREWORD

Arts education is a collective term that denotes instruction and learning in four separately distinct subject areas--dance, music, theatre arts, and visual arts. Each is a unique but integral component of the *North Carolina Standard Course of Study* for kindergarten through grade twelve. Facilities that effectively support arts education curricula must interrelate with overall school design while addressing the unconventional requirements of laboratory-oriented instruction. Much of the study, learning, and practicum for arts education necessitates peculiar environmental considerations and results in performance or display of an art product. Instructional spaces should be designed and equipped to promote each type of teaching and learning and to provide maximum safety for students during the arts process.

This document suggests facilities necessary to conduct instruction in the four arts programs in grades K-8 and conveys essential features that should be present. It is a supplement to the *North Carolina Public Schools Facilities Guidelines* and is a resource to assist design professionals to plan arts education facilities that meet the needs of and complement dance, music, theatre arts, and visual arts programs in North Carolina's public schools. We hope you find it useful.

Phillip J. Kirk, Jr.

Phillip J. Kirk, Jr., Chair
State Board of Education

Michael E. Ward

Michael E. Ward, State Superintendent
North Carolina Department of Public Instruction

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Arts Education Coordinators of North Carolina

Ballard, Roger, AIA, Consulting Architect, School Planning Section, N.C. Department of Public Instruction, Raleigh, NC.

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Edwards, David, Ed.D., Education Consultant, School Planning Section, N.C. Department of Public Instruction, Raleigh, NC.

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(1) Much of the material and many of the illustrations included in the Sound Management, Sound Isolation, and Acoustical Design sections of this publication and in the Cubic Volume for Choral and Instrumental Music Rooms, Acoustics, Storage, Traffic Flow, Security, and Equipment sections of the Appendix are based upon the *Planning Guide for Secondary School Facilities,* 1997, published by the Wenger Corporation of Owatonna, Minnesota. This information is included by permission of the Wenger Corporation.

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INTRODUCTION

BACKGROUND AND OVERVIEW

The arts have been a part of life from the very beginning. They have defined, described, and deepened the human experience and have been an inseparable part of the human journey. All people have an abiding need for meaning--to connect time and space, experience and event, body and spirit, intellect and emotion. Art is created to make these connections--to express the inexpressible--and to connect each new generation to those that have gone before.

Many factors impact arts education programs in a school. The demand for and extent of facilities for the arts should be a collective decision among design professionals, school staff and administrators, community representatives, and others who share interest in their development and use. To design optimum facilities for arts education instruction, it is helpful to have some fundamental knowledge about how programs are defined and prescribed for the public schools in North Carolina. Preconceived notions about arts education programs may not accurately correlate with the intent of formal programs of study. In order to effectively collaborate with school personnel and make informed design choices and decisions, the designer should possess a basic sense of what arts education comprises and of what an education in the arts achieves, in relation to student learning.

Study and instruction in the arts occur in traditional and non-traditional ways. In order for learning to be followed by practical application, arts education programs often require non-traditional spaces with non-traditional features. Examples include stages with theatrical lighting and dance studios with resilient floors. Much of the rationale for the scope and design of arts facilities should stem from a clear understanding of the potential of arts education programs and the realities of the programs that will be delivered at the school for which the design is being created. The following provides insight into instruction and learning that should take place in the completed facility.

ABOUT ARTS EDUCATION

Each student, regardless of background, talent, or disabilities, deserves access to the rich education and understanding that the arts provide. In an increasingly technological society overloaded with sensory data, the ability to perceive, interpret and evaluate such stimuli is critical. The arts can help the student develop multiple capabilities for understanding and deciphering an image- and symbol-laden world, and should be considered an integral part of all general education.

The ***North Carolina Standard Course of Study*** identifies what students in grades K-12 should know and be able to do as a result of a comprehensive arts education. By involving the "whole" child, the arts gradually teach literacy while developing intuition, sensitivity, reasoning, imagination, and dexterity.

Society benefits because the student gains powerful tools for understanding human experiences, both past and present, by:

- collaborating and working in teams;
- making decisions creatively, where no prescribed answers exist;
- learning to respect and adapt to diverse ways of thinking, working, and expressing;
- learning problem recognition and solving involving expressive, analytical, and developmental tools in every situation;
- understanding the influence of the arts and their power to create and reflect on cultures;
- developing the essential senses of sight, hearing, smell, taste, touch, and kinesthetics as intellectual, emotional, physical, creative, and expressive acts;
- analyzing non-verbal communication and making informed judgments about cultural products and issues; and
- communicating effectively.

Concepts critical to arts education which directly influence facilities design include:

- The comprehensive program is a sequenced learning experience across four arts disciplines.
- The arts require focused time for sequential study, reflection, and practice.
- Instruction in the arts must occur through a hands-on orientation.
- Arts education should promote interdisciplinary study and integration among and across the arts and other disciplines.
- Technology should enhance the student's ability to synthesize, integrate, and construct new meanings from a wealth of resources and information.

USING THE PLANNER

This publication is a reference document for school facilities designers. It describes arts education programs and the facilities that support them. It is neither comprehensive nor all-inclusive, but provides an initial understanding of the nature and purposes of arts education programs around which facility designs evolve. The planning guidelines in no way supersede state or local codes or regulations, nor do they replace federal or state legislation regarding building design and construction, access, safety, or other pertinent issues.

Various sections of this document focus on concepts and features common to most or all arts education subject areas, while others describe requirements peculiar to the individual areas of dance, music, theatre arts, and visual arts. Sample floor plans generally represent the top end of the facilities spectrum and reflect spaces that are ideal for maximum implementation of the standard state course of study. They serve to supplement and clarify written descriptions and are not intended for direct replication within facility designs. Actual facilities designs will relate to the present and anticipated program needs determined by the owner.

As a design takes shape, it is likely that additional, more detailed information will be needed about programs, equipment, and purposes that will function within a facility. A number of publications are listed in the *Additional Resources* section of this planner. In addition, staff consultants with the Arts Education and Healthful Living Section of the North Carolina Department of Public Instruction are available to discuss areas of concern and may be contacted by phone at (919) 715-1785 (dance or music) and (919)715-1783 (theatre arts or visual arts).

COMMON FACILITIES ELEMENTS

Designing school facilities challenges the collective planning skills and creativity of educators and design professionals. Providing desirable arts education learning environments for the myriad of instructional processes and exhibits introduces particularly complex issues into the collaboration. At least three characteristics unique to arts education facilities emphasize the importance of good design decisions.

The high cost of space and equipment, compared to that of regular academic teaching stations in a school The required volumes of space for some laboratories, performance spaces, and exhibit areas, and storage areas for teaching supplies, production materials, and technical equipment often exceed those for academic teaching stations. Furthermore, equipment costs for these spaces are almost always significantly greater because of the necessity for specialized sound, lighting, and technology.

The inflexibility of laboratory, performance, and exhibit space Inherent artistic, technical, and equipment requirements may often demand large, unobstructed spaces, high ceilings, special electrical, plumbing, and mechanical systems, non-traditional floors and floor coverings, and acoustical treatment. Such spaces might provide limited flexibility for other uses. Due to required noise control and public access, These spaces are often somewhat secluded from the remainder of the facility.

The location of facilities for the four program areas, both in relationship to one another and to the remainder of the school Facilities for the four instructional areas should be in proximity to promote collaborative efforts. However, individual spaces should be separated by corridors or sound-dampening walls so the considerable sound generated by performers' voices, musical instruments, power tools, or audiences does not carry into adjacent spaces used simultaneously throughout the school day and beyond. Movement resulting from class changes, rehearsals, performances, scenery construction, and visual arts processes and exhibits should be considered in determining the sizes and locations of doors, proximity of classroom, laboratory, and performance spaces, and noise and crowd management strategies.

This section identifies design considerations that are common to arts education facilities.

SOUND MANAGEMENT

The most important common design aspect for arts education facilities is sound management. Primary considerations are:

Sound isolation Sound is confined within desired spaces and not allowed to interfere with instruction in other areas.
Acoustical design Provision is made for the quality and control of sound.

SOUND ISOLATION

Good sound isolation is a result of effectively blocking the transmission of sound from one room to another. It is one of the surest and most cost-efficient methods of maximizing the investment in an arts education facility. The following basic principles should be adhered to.

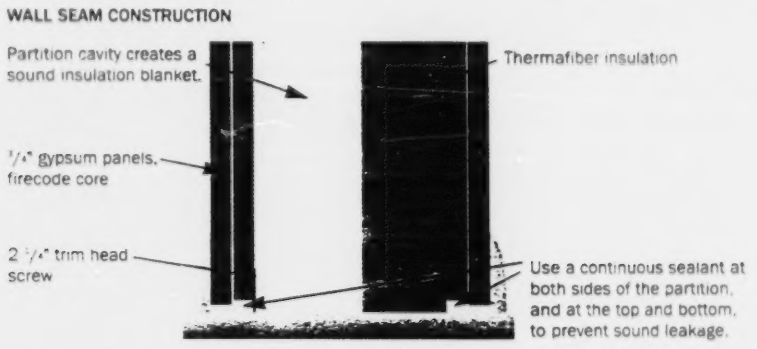
➤ Use full-height, sound insulating walls with airtight seals to the building structure at both floor and roof decking.

➤ Keep doors and windows to a minimum to reduce sound leakage.

➤ Specify doors and windows with acoustical ratings equal to the wall construction.

➤ Buffer zones, such as corridors and storage rooms, are better sound isolators than single walls.

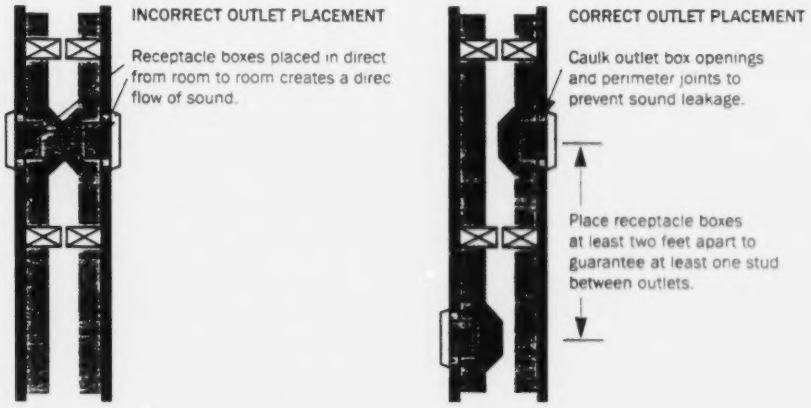
➤ Wall seams are a common source of sound leakage. Sealed construction should be specified.


WALL SEAM CONSTRUCTION
Partition cavity creates a sound insulation blanket.
Thermafiber insulation
5/8" gypsum panels, firecode core
2 1/4" trim head screw
Use a continuous sealant at both sides of the partition, and at the top and bottom, to prevent sound leakage.

Courtesy Wenger Corporation

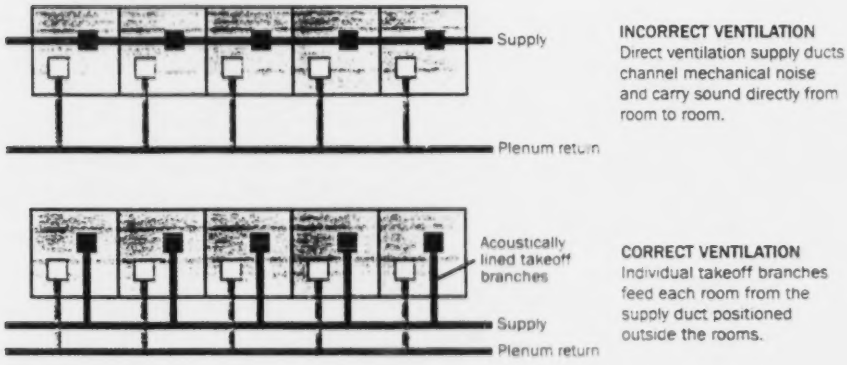
➤ Wall seams should be checked at roof deck, floor, electrical outlets, and ventilation ducts.

➤ Spaces that allow air to move from room to room also allow sound to move from room to room. An entire sound-isolated wall can be rendered ineffective by something as seemingly insignificant as a room-to-room electrical box or a gap as small as one square inch.


INCORRECT OUTLET PLACEMENT
Receptacle boxes placed in direct from room to room creates a direc flow of sound.
CORRECT OUTLET PLACEMENT
Caulk outlet box openings and perimeter joints to prevent sound leakage.
Place receptacle boxes at least two feet apart to guarantee at least one stud between outlets.

Courtesy Wenger Corporation

➤ Ventilation systems often serve to transfer sound between rooms. The most effective solution is to route acoustically lined take-off branches into each room from a supply source placed outside the rooms.


Supply
Plenum return
INCORRECT VENTILATION
Direct ventilation supply ducts channel mechanical noise and carry sound directly from room to room.
Acoustically lined takeoff branches
Supply
Plenum return
CORRECT VENTILATION
Individual takeoff branches feed each room from the supply duct positioned outside the rooms.

Courtesy Wenger Corporation

➤ Classrooms for the arts are physically active environments that require an air exchange rate greater than that of most other classrooms. Larger ducts and vents with larger grills should be employed to reduce noise caused by increased air volume and velocity.

➤ Mechanical systems often produce a variety of noises that interfere with instruction in the arts. Facilities plans should include specific procedures to minimize this interference.

➤ Mechanical equipment can cause vibration and should not be directly connected to the arts suite structure. It is imperative that the HVAC contractor provide low-vibration alternatives.

➤ Drinking fountains should be placed outside arts instruction rooms, where compressor noise will not prove a distraction.

ACOUSTICAL DESIGN

Effective acoustical design for facilities for the arts requires attention to two primary considerations: 1) room and wall shape and cubic volume; and 2) acoustical finishes on floors, walls, and ceilings. The following concepts should be considered.

Room and wall shape

➤ Untreated parallel walls cause flutter echo. This annoying ringing or buzzing sound can be corrected with acoustical treatments that diffuse and absorb sound. Non-parallel and splayed walls can reduce flutter echo, but these solutions cost significantly more per square foot than acoustical treatments. The money saved can be more effectively used for increasing volume, improving sound isolation, or installing better HVAC systems.

➤ Avoid visual acoustics. These are design features, such as curved walls and domes, that look attractive and appear to have good acoustical properties but are, in reality, detrimental to the acoustic environment.

➤ Parallel walls in square or cube-shaped rooms create additive wave lengths, called standing waves, that over-emphasize certain frequencies and make them abnormally loud. Creating a rectangular room by varying one dimension 30 percent or more is a typical solution.

Cubic volume

➤ Reducing cubic volume can make a room unresponsive and excessively loud, which may be impossible to totally correct.

Floor finishes

➤ Carpeting absorbs high frequency sounds. If carpet must be used, select thin industrial carpet that is nearly acoustically transparent.

➤ Wood or other hard-finish floors are preferable for flexibility, durability, and ease of maintenance.

Wall finishes

➤ Walls must be treated with an effective combination of absorber and diffuser panels.

Ceiling finishes

➤ Ceilings are the largest unencumbered square footages available for acoustical treatment. It is important to specify absorptive fiberglass, which is often identical in appearance to mineral board.

TEACHER WORK STATIONS

Each teacher should have a work station that comprises, as a minimum, an adequately lighted desk-height work surface with computer terminal and telephone, a chair, a lockable legal-size file cabinet for student records and another for instructional materials, and a large, lockable cabinet for the storage of teaching materials and personal items. Arts educators usually teach many different classes in a given day and storage for significant quantities of instructional materials and equipment is necessary.

In certain circumstances, particularly in middle schools, teacher offices contiguous to teaching spaces may be warranted. Arts education teachers often supervise students who work independently throughout the school day and beyond or may have supervisory responsibilities for groups from the community that use facilities for the arts.

Where combined or shared teacher work stations are used in lieu of individual teacher offices for reasons of efficiency and flexibility, a best-case scenario will locate them in proximity to teaching spaces--even at the elementary level. As a design evolves, the owner and designer will determine the most feasible use of available space.

If teacher work stations are located in common areas and teacher "stations" provided within the classroom proper, separate work and conference space should be readily accessible. Work areas should be equipped with shelf space for books and other printed material and storage for audiovisuals and other teaching aids. One or more tables with chairs can contribute to the flexibility and utilization of the area. Teacher workrooms for the preparation of instructional materials should be located contiguous to the work stations area.

PERFORMANCE FACILITIES

Performance facilities are mentioned in the theatre arts section of this planner. In general, available performance facilities will be in continuous use for music, dance, and theatre arts. Multi-use facilities, such as gymnatoriums and cafetoriums, cannot adequately or equitably serve such programs, afford limited access, seldom have all the requisite furnishings and equipment, and are not recommended for arts education.

SMALL SCHOOLS

Renewed interest in the potential benefits of smaller schools has emerged pursuant to studies on school safety and order and student achievement. The facilities recommended in this publication present best-case scenarios that accommodate the *North Carolina Standard Course of Study* in its most comprehensive form and are consistent with current State Board of Education school size guidelines*.

Designing smaller schools entails more than proportionately reducing the size of various components within a facility. Requisite administrative and support elements require certain minimum amounts of space in order to function, regardless of the size of the instructional area. Likewise, some instructional spaces may be difficult to down-size (other than the *quantity* of regular classrooms) without compromising the quality of curriculum offerings.

A major consideration in electing smaller schools may be establishing a reasonable balance between curriculum and facility issues--i.e. what are the boundaries of where program quality and facility size can meet to the best advantage of the student. A sample combination facility for teaching the arts to a smaller student population in a smaller physical setting can be found in the Appendix.

*(Current guidelines reflect effective and efficient school sizes and are predicated on comprehensive curriculum and program offerings and economy of facility construction, operation, and maintenance.)

ALTERNATIVE SETTINGS

Increased attention is being given the advantages of educational programs in alternative settings for some students. Where the greatest measure of academic success cannot, for a variety of reasons, be achieved in more traditional instructional settings, programs are being implemented in other - often non-traditional - settings, such as in separate school buildings, during alternative times of day and evening and on weekends, and in non-school community facilities.

It is important not to overlook the value of arts education in designing alternative curricula, especially at the middle school level. Students often respond more positively to kinesthetic learning experiences than to tradition-bound teaching strategies. Some students who struggle within the regular classroom environment excel within less formally-structured venues that encourage individuality and creativity.

TEACHING FACILITIES

DANCE

Purpose: To develop for the student an understanding of the diverse ideas, beliefs, cultures, attitudes, and feelings of humankind throughout time, as communicated by movement.

Types of Instruction and Activities: Discussion; demonstration; small and large-group activities; performance-sharing sessions

Space Requirements:

1. A minimum of 1,700 square feet and large enough to accommodate all students in a class moving at the same time. At least 65 square feet per student is desirable for dance activity space.

2. Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

3. An enclosed, secure computer center with a minimum of 80 square feet for **elementary** schools and 120 square feet for **middle** schools within or adjacent to the dance classroom, with infrastructure for phone and Internet access, is desirable. Ready access to a computer lab may constitute a minimum, although less desirable, alternative. Lockable storage for student technology work files should be provided. Two-to-four computer stations should be provided at the **elementary school** level and four-to-six stations are desirable at the **middle school** level.

4. For **middle grades programs** only, toilets and dressing spaces contiguous to the dance facility are desirable to accommodate quick changes into and out of dance apparel. Individual student lockers and lighted mirrors are desirable in these spaces.

Special Needs:

1. Sprung wood or resilient wood floors are desirable. Concrete, tile, wood-over-concrete, and wood-over-tile floors are not recommended due to the potential for injury from falls or repetitive jumping.

2. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts.

3. The physical nature of dance activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.

4. Absorber and diffuser panels should be utilized to provide appropriate acoustical properties and a quiet environment. The facility is best located away from high-circulation areas and should be sound isolated from the rest of the school.

5. The room should be open throughout and clear of fixed furniture and casework. Outside wall corners should be rounded or bullnosed. The space should be designed to preclude distractions from other people or classes passing through.

6. Electrical outlets should be located on perimeter walls.

7. Track lighting should be provided and controlled by switches separate from those controlling regular overhead lighting.

8. Provision should be made for darkening the room for use of audiovisuals.

9. Shatter-proof mirrors should be mounted on at least one wall, with drapes installed to cover them when necessary.

10. Water fountains, for student rehydration after classroom activities, should be readily accessible but should not be located where overflow can spill onto wood flooring.

Typical Furniture:

1. Rolling costume cabinet
2. Audiovisual cart
3. Work table with chairs
4. Bookcases: Minimum of one (1); two (2) are desirable.
5. File cabinets: Minimum of one (1); three (3) are desirable.
6. Folding or stacking student chairs, with tablet arms, in sufficient numbers to accommodate largest class membership.

Typical Storage: Minimum of 100 square feet of secure storage space (200 square feet are desirable) for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials.

For **middle grades programs** only, costume storage with hanging and box storage shelves should be provided contiguous to the dance facility. A minimum of 250 square feet is desirable.

Typical Equipment:

1. Bulletin board for display of general information, dance concepts, photos, and student drawings
2. Minimum of one (1) white dry marker board; two (2) are desirable
3. Stereo CD/cassette unit with cuing function and wall-mounted speakers
4. Camcorder
5. Computer system
6. VCR and monitor

Sample Floor Plan:

See Page 44.

MUSIC

Purpose: To contribute in important ways to the quality of the student's life by developing perception, observation, communication, and the creative process.

Types of Instruction and Activities: Discussion; demonstration; small and large-group activity; performances; sharing sessions

GENERAL MUSIC:

Space Requirements:

1. Area: The space should be large enough to accommodate all students in a class moving, sometimes with instruments, at the same time--at least 65 square feet per student is desirable.

2. Enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

Special Needs:

1. The physical nature of music activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.

2. The room should be open throughout, with no fixed furniture or casework except along the perimeter Outside corners within the room should be rounded or bullnosed.

3. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts.

4. Provision should be made for darkening the room for use of audiovisuals.

5. The facility should provide appropriate acoustical properties and a quiet environment.

6. Electrical outlets should be located on perimeter walls.

7. Convenient access to a water fountain should be provided.

8. Running water and a sink for instrument cleaning are desirable.

Typical Furniture:

1. Audiovisual cart
2. Work table with chairs
3. Bookcases: Minimum of one (1); two (2) are desirable
4. File cabinets: Minimum of one: (1); three (3) are desirable
5. Folding or stacking student chairs, with tablet arms, in sufficient numbers to accommodate largest class membership

Typical Storage: Sufficient secured storage space (200 square feet is desirable) for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials and Orff instruments, such as bass xylophones and metallophones.

For **middle grades programs** only, secured shelving or lockers are desirable for the storage of small and large musical instruments within or contiguous to the classroom.

Typical Equipment:

1. Stereo cassette/CD player/recorder with wall-mounted speakers
2. Piano; electronic keyboard/synthesizer; camcorder; VCR with monitor; computers
3. Bulletin board for general information, instruction, photos, and student work
4. Cork strips with hooks and clips for poster display
5. Minimum of one (1) white dry-erase board; two (2) are desirable--one with permanent music staff lines and one plain
6. For **elementary grades programs** only, pull-down maps: world, United States, and North Carolina
7. Large mirrors should be mounted on at least one wall for immediate feedback on jaw and lip positions and facial expressions while singing, and for posture and concert positioning. Drapes should be provided to cover the mirrors when not in use.

Sample Floor Plan:

See Page 39.

CHORAL MUSIC (Middle Grades Only):

Types of Instruction and Activities: Similar to general music.

Space Requirements (A sample plan is shown on Page 42):

1. There should be a minimum of from 1,000 to 1,600 square feet of floor space, with a ceiling height of at least 16 to 20 feet. This area will accommodate up to approximately 54 musicians. An additional 30-35 square feet should be allowed for each additional vocal student beyond this range to accommodate the largest class membership. The total per-musician square footage is not equal to the footprint of a musician within the room. Rather, it is a means for calculating total additional room size for larger groups that takes into consideration additional space requirements such as aisles, storage, etc.

2. Enclosed office space with computer and phone access (80-100 square feet) is desirable for program administration and student consultation.

Special Needs:

1. The physical nature of choral music activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.

2. The room should be open throughout, with no fixed furniture or casework except along the perimeter. Outside wall corners should be rounded or bullnosed.

3. The room should be well lighted, within a 50-75 foot-candle range throughout. Fluorescent systems should have remote ballasts or Type A quiet recessed ballasts

4. Provision should be made for darkening the room for use of audiovisuals.

5. Running water should be available.

6. Electrical outlets should be located on perimeter walls.

7. The facility should be treated with absorber and diffuser panels to provide appropriate acoustical properties and a quiet environment, and it should be isolated from the remainder of the school.

8. The floor should be flat. Permanent risers should not be considered.

9. A double set of entry doors enclosing an entry foyer is desirable for sound isolation. Walls should be non-parallel or acoustically treated and the room should have a sound transmission classification of at least STC50 for both interior and exterior walls and STC45 for doors and windows.

10. A water cooler for rehydration should be readily accessible, but should not be located where overflow can damage the floor or where compressor noise will be a distraction.

Typical Furniture:

1. Audiovisual cart
2. Work table with chairs
3. Bookcases: Minimum of one (1); two (2) are desirable
4. File cabinets: Minimum of one: (1); three (3) are desirable
5. Folding or stackable student chairs with tablet arms in sufficient numbers to accommodate largest class membership
6. Racks for currently-studied music
7. Conductor stand
8. Portable choral risers

Typical Storage:

1. Sufficient secured storage space (200 square feet is desirable) with shelving for tapes, records, CDs, audio and video equipment, props, instruments, videos, books, reference materials, and other instructional materials and Orff instruments (such as bass xylophones and metallophones).

2. A contiguous, lockable, environmentally controlled costume/robe storage room (150-200 square feet is desirable) with hanging and box storage shelves.

Typical Equipment:

1. Stereo cassette/CD player/recorder with wall-mounted speakers and suspended microphones placed for maximum stereo effect
2. Piano; electronic keyboard/synthesizer; camcorder; VCR with monitor; computers
3. Bulletin board for general information, instruction, photos, and student work
4. Cork strips with hooks and clips for poster display
5. Minimum of one (1) white dry-erase board; two (2) are desirable--one with permanent music staff lines and one plain
6. Pull-down maps: world; United States; and North Carolina
7. Large mirrors should be mounted on at least one wall for immediate feedback on jaw and lip positions and facial expressions while singing and for posture and concert positioning. Drapes should be provided to cover the mirrors when not in use.

INSTRUMENTAL MUSIC:

Types of Instruction and Activities: Similar to general music.

Space Requirements:

1. Similar to general music for **elementary grades programs**.

2. For **middle grades programs** only, from 1,000 to 1,600 square feet is recommended (with up to 2,500 square feet desirable), with a ceiling height of at least 20 feet. This area can effectively accommodate up to 42 musicians. An additional 30-35 square feet is desirable for each additional musician. The total per-musician square footage is not equal to the footprint of a musician within the room. Rather, it is a means for calculating total additional room size for larger groups that takes into account additional space needs such as aisles, storage, etc.

3. For **middle grades programs** only, enclosed office space (80-100 square feet) with computer and phone access for program administration and student consultation is desirable.

Special Needs: In addition to those specified for general music, the following are recommended:

1. The floor should be flat. Permanent risers should not be considered.

2. The room should be acoustically isolated from the remainder of the school.

3. For **middle grades programs** only, a double set of entry doors enclosing an entry foyer is desirable. Walls should be non-parallel or acoustically treated and the room should have a sound transmission classification of at least STC50 for both interior and exterior walls and STC45 for doors and windows.

4. For **middle grades programs** only, space should be provided for maintenance and repair of instruments.

5. For **middle grades programs** only, an oversized door (4'-0" minimum width) should provide access to a rear loading dock to facilitate movement of large equipment to and from performance sites outside the school.

6. For **middle grades programs** only, access to a deep sink with a goose-neck or flexible sprayer for cleaning brass instruments.

7. Cubic volume is provided in the Appendix.

Typical Furniture:

1. In addition to that specified for general music, a conductor's stand is typical.

2. For **middle grades programs** only, music storage racks, a conductor podium, and portable percussion cabinets should be provided.

Typical Storage:

1. As with general music, secured shelving or lockers for storage of small and large instruments should be provided. Instrument storage along perimeter walls can provide additional flexibility in facility usage, relieve student traffic congestion often found in separate storage rooms at the beginning and end of classes, and provide easy visual access for the teacher.

2. For **middle grades programs** only, a secure, environmentally controlled uniform storage room (300 square feet is desirable) with hanging racks and box storage shelves should be provided, where appropriate, contiguous to the classroom

Typical Equipment: Similar to general music, with the exception of the maps for **elementary grades programs** only.

Sample Floor Plan:

See Page 40 .

THEATRE ARTS

Purpose: To provide typical classroom and activity-based creative drama study and performance or sharing sessions. For **middle grades programs** only, instruction will include seat work, drafting and model making, creative drama, and rehearsal. In the **middle grades**, this space is essentially for classroom instruction and should be in addition to and complementary to a black box arena or theatre arts laboratory/auditorium that may be used for both instruction and performance.

Types of Instruction and Activities: For **elementary grades programs**, discussion; pantomime; role play; demonstration; small- and large-group activities; and performance and sharing sessions. For **middle grades programs**, lecture; demonstration; independent inquiry; small- and large-group projects; activity-based creative drama; and technical theatre study.

Space Requirements: The room should be large enough to allow for a variety of set-ups, to include tables and chairs for seat work, should include a large open space for whole-class and group activities, and provide flexibility that permits small performance or sharing sessions to occur in a theatre-style setting facing portable staging. A minimum of 1,800 square feet is recommended.

Special Needs:

1. Should be located near other arts education facilities, with easy access to other performance facilities.

2. Sound dampening should be provided that allows creative drama activities at rehearsal volume.

3. Should be equipped with auxiliary theatrical track lighting and a light dimming system to affect various performing spaces, in addition to standard fluorescent classroom lighting.

4. Should be acoustically treated to effect quality sound with students with soft voices during class and performance.

5. Floor should be carpeted; outside wall corners should be rounded or bullnosed.

6. Portable stage should effect slightly raised performance area.

7. Infrastructure to support computers and Internet connections should be provided.

8. Audiovisual infrastructure is required.

9. The physical nature of theatre arts activities should be considered when calculating the fresh air ventilation rate. A quiet air-handling system should be specified. Temperature control should be zoned, with temperatures capable of being maintained within a two-to-four-degree range. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts. Climate control system should operate quietly and without producing drafts.

10. A minimum ceiling height of 12 feet is recommended (14 feet for **middle grades**).

11. Light control should be provided at windows for purposes of room darkening.

Flexibility Needs: Student furniture and portable platform sections should be easily moved for frequent rearrangement.

Typical Furniture:

1. Folding or stacking individual student chairs and tables. For **middle grades programs** only, tables should be also be suitable for technical drawing and model making.
2.Teacher desk and chair
3. Dry marker and tack boards
4. Projection screen

Typical Storage:

1. Lockable student storage for books and supplies.
2. Lockable teacher storage for books; audio, video, theatrical and computer equipment; audiovisuals; and art supplies, costume pieces, and props.
3. For **middle grades programs**, shelving and cabinet units (with drawers) for storing instructional and student materials, books, and projects.

Typical Equipment:

1. Television, video camera and monitor, and, for **middle grades programs**, video recorder/player
2. Overhead projector and screen
3. Audio player with remote control and both CD and cassette capability
4. Computers

Sample Floor Plan:

See Page 46.

VISUAL ARTS

CLASSROOM/STUDIO:

Purpose: To provide typical classroom, activity-based visual arts study involving both small and large works of art.

Types of Instruction and Activities: Discussion; demonstration; individual and group activities; computer use; display; and video and slide projection. Activities may include, but are not limited to, drawing, collage, the making of three-dimensional work, print making, painting, fibers, photography, jewelry, ceramics, calligraphy, etc.

Space Requirements:

1. One art room per 500 students enrolled.
2. A minimum of 55 square feet of work space per student, excluding storage.
3. 1,200-1,500 square feet, excluding storage.
4. A minimum of 400 square feet of storage.
5. Separate 45-square-foot kiln room.
6. Should be located near other arts education facilities.

Special Needs:

1. Where two or more art rooms are needed, they need not be identical but may each combine some specialized areas.

2. Casework and furnishings should be age-appropriate.

3. Ground-floor location to facilitate delivery of materials and supplies and to provide an outdoor venue for instruction and practice.

4. Minimum ceiling height of 10'-0".

5. Several large, acid-resistant sinks with sediment traps and accessible from more than one side. Sinks should be height-appropriate and should have hot and cold supply and mixing faucets.

6. General lighting that includes both fluorescent and incandescent fixtures for accurate color work and that is positioned to reduce shadows in all parts of the room.

7. Powered ventilation to exhaust fumes and promote drying of art work.

8. Vented box or area for airbrushing and for mixing toxic fumes.

9. Floor drains in areas where water or other liquids might be spilled.

10. Electrical receptacles on perimeter walls and above counters, to include 240v outlets where required, to lessen use of extension cords.

11. Power outlets of a specific type to accommodate specialized equipment such as kilns and potters' wheels.

12. A North-facing wall with large windows and skylights to provide the most desirable lighting.

13. A minimum of one wall with display capability from floor to ceiling, covered in a porous material that can accommodate hanging devices such as pins, staples, or tacks.

14. Ceiling tracks along the walls and across the ceiling to hang three-dimensional art work.

15. For **middle grades programs** only, display casework such as shelves and cases for two- and three-dimensional work like sculpture and ceramics. (Should be well-lighted and equipped with multiple-lighting plug-in tracks with movable lighting fixtures.)

16. Acoustic treatment to lessen interference with other instructional areas.

17. The physical nature of student activities should be considered when calculating the fresh air ventilation rate. Temperature control should be capable of maintaining temperatures between 68 and 70 degrees Fahrenheit. Capability to maintain humidity at between 50 and 60 percent should be provided. The area should be well ventilated, but air flow should not produce drafts.

18. Counter-height table or cabinet deep enough to accommodate a large paper cutter.

19. Paper towel and soap dispensers should be placed in a variety of locations around the room.

20. Wiring for television monitor, computer with Internet access, and telephone.

21. Direct access to partially covered outdoor terrace with secure electrical outlets.

Flexibility Needs: Furniture should be sturdy and easily moved to facilitate frequent reconfiguration of instructional space.

Typical Furniture:

1. Large, flat tables with durable tops and chairs (age-appropriate) that allow for frequent re-configuring.
2. Drying racks adequate for multiple classes for drying art work.
3. Bookcases for texts and references.

4. Lockable flat storage to accommodate large art pieces.

Typical Storage:

1. Storage within the classroom for student materials and supplies.

2. Lockable storage (350 square feet is desirable) contiguous to the classroom for large quantities of diverse art supplies, equipment, and student work.

3. Storage for large sheets of art paper, matte board, clay and clay containers, print-making and sculpture supplies, tools, and specialty items.

4. Lockable metal storage cabinets suitable for flammable and combustible materials.

Typical Equipment:

1. Kiln, with appropriate ventilation, located in a separate room of at least 45 square feet contiguous to the classroom.
2. For **middle grades programs** only, easels, potters' wheels, floor looms, printing presses, and drying racks.
3. A.V. screen, with blinds or shades for controlling natural light.
4. Computers, printers, and multi-media equipment (**middle grades programs** only) located in a separate space contiguous to the classroom.

Sample Floor Plan:

See Page 43.

APPENDIX

ARTS EDUCATION PROGRAM DESCRIPTIONS

Dance

Dance develops for the student an understanding of the diverse ideas, beliefs, cultures, attitudes, and feelings of humankind throughout time, as communicated by movement, by:

➤ Providing the student with a kinesthetic (bodily) way of experiencing, perceiving, understanding, learning, and communicating.
➤ Developing higher-order thinking through perceiving, creating, performing, analyzing, and evaluating.
➤ Providing development and application of reading, writing, and mathematics skills.
➤ Challenging the intellect and creativity of each student.
➤ Instilling concentrated focus and a disciplined approach to lifelong learning.
➤ Integrating with all framework content areas.
➤ Developing respect for diverse ways of thinking, working, and expressing ideas.
➤ Nurturing problem recognition and solving through considering, assessing, and adopting appropriate solutions.
➤ Providing opportunities for social development and collaboration with others.
➤ Forcing a diverse cultural and historical perspective.
➤ Promoting a healthy body and an active mind for learning.
➤ Encouraging aesthetic discovery and growth.
➤ Providing knowledge of vocational and avocational opportunities.

Music

The study of music contributes in important ways to the quality of the student's life by:

➤ Developing perception, observation, communication, and the creative process.
➤ Strengthening the understanding of mathematics and the ability to read and write.
➤ Nurturing and utilizing a wide range of thinking skills in creation and performance.
➤ Integrating many elements of study and knowledge of music, other art forms, other curricular areas, and related uses of technology.
➤ Helping the student to understand his or her own and other cultures.
➤ Increasing self-discipline and control of the emotions in thought and action.
➤ Expanding aesthetic comprehension and the ability to critique effectively.
➤ Providing opportunities for social development and interaction with others.
➤ Aiding the student in learning to adapt and respect others' diverse ways of thinking, working, and expressing themselves.
➤ Enhancing problem-recognition and problem-solving abilities and the ability to consider and adopt alternative solutions.
➤ Encouraging the student to expand his or her understandings and horizons.
➤ Helping the student to become a knowledgeable consumer of music.

Theatre Arts

Theatre arts teaches the basic skills, thinking skills, and personal qualities that:

➤ Develop an understanding of the ideas, attitudes, beliefs, and feelings of diverse peoples in different times throughout history, as communicated through literature and theater.

➤ Employ techniques for teaching and learning, through developmental processes and activity-oriented methods.

➤ Promote higher-level critical and creative thinking skills, problem recognition and solving, intuition, examination and application of conflict resolution, and the learning of curriculum skills such as reading, writing, and mathematics.

➤ Assist in focusing the emotions for controlled use, strengthening the imagination for creative self-expression, disciplining the voice and body for purposeful use, expanding intellectual horizons to include aesthetic awareness, and providing a basic understanding and critical appreciation of all of the theatre arts.

➤ Involve making connections between theatre arts and other art forms, other curriculum areas, dramatic media, and the related use of technology (to include numbers and data).

➤ Provide an intense study of what playwrights seek to convey and how this is intensified through theatrical production, thus giving students insights into countless aspects of the diverse and changing world.

➤ Include the reading, viewing, listening, researching, writing, speaking, preparing to perform, performing, and directing of traditional and experimental theatrical forms, as well as the accompanying aspects of technical production.

➤ Engage students in the creative and the practical application of theatre techniques (such as observing, considering possibilities, and communicating) that students can use in studying other areas of the curriculum and for life-long learning.

➤ Enable students to function and communicate more proficiently, work independently as a member of a team, value the individual contributions of others, and to learn virtually any subject matter in a more dynamic way.

Visual Arts

Visual arts provides visual literacy for the child by promoting fluency in the various modes of visual communication by:

➤ Employing developmentally appropriate processes for teaching and learning that are based on activity-oriented methods.

➤ Encouraging disciplined creativity by using higher-level critical thinking skills to identify problems, explore original solutions, and complete the problem-solving process.

➤ Utilizing reading, writing, and math to help explore art concepts and to facilitate learning in these three areas.

➤ Making enriching connections between the visual arts and other curricular areas.

➤ Expanding aesthetic and intellectual awareness through reading, writing, listening, researching, discussing, critiquing, and reflective thinking.

➤ Teaching how to use both traditional media and contemporary methods incorporating new technology to create art that is individual and expressive.
➤ Building knowledge and understanding about ideas, values, and beliefs of people in different times throughout history, as communicated through visual art, with the express goal of developing visually literate students with an empathetic and critical appreciation of the artistic achievements of others.

CUBIC VOLUME FOR CHORAL AND INSTRUMENTAL MUSIC ROOMS

Excellent acoustics require adequate cubic room volume that results from ample floor space and ceilings of sufficient height. In too small a room, the first sound reflections return to the musician's ears so quickly that their sound cannot be heard.

Where adequate cubic volume is achieved, sound takes longer to reflect off more distant wall and ceiling surfaces, enveloping the musician with sound and providing a sense of presence. The musician can thus hear better, creating an environment in which learning can be achieved by listening. This should be a minimum goal for spaces designed for instrumental and choral music learning.

Rooms that are too small may also result in dangerously high sound-pressure levels. due to insufficient volume to dissipate and absorb the loudness created by musical ensembles. Rehearsals in an excessively loud environment can be extremely stressful to both student and teacher and can cause permanent hearing loss over time. Orchestras and concert, marching, and jazz bands generate especially high sound-pressure levels. Special care should be taken to control loudness where these groups rehearse and perform.

CUBIC VOLUME GUIDELINES

ROOM	CEILING HEIGHT	FLOOR SPACE	RESULTING VOLUME PER MUSICIAN
Choral Music	16-20 feet	1800 square feet	350-500 cubic feet
Instrumental Music	18-22 feet	2500 square feet	550-700 cubic feet

Courtesy Wenger Corporation

ACOUSTICS

Good acoustics is dependent upon the ideal combination of absorption and diffusion of sound. Each music environment should be treated individually, according to its shape, volume, etc. For example, treating solely with absorber panels will only reduce loudness. Diffuser panels are needed to scatter sound and improve communication from one part of a room to another.

Frequency Range The frequency range of sound in the music suite is very different from the frequencies produced in other areas of the school and should be treated accordingly.

1. Common finishing materials, such as carpet, drapes, and upholstery, absorb higher frequencies but not lower frequencies.

2. In rooms that utilize only high-frequency absorption, flutes, violins, sopranos, and other high-frequency sounds (including the high overtones of most instruments) can be lost. Intonation, articulation and timing can be blurred, and critical listening may become impossible.

3. Similarly, low frequencies become overpowering and acoustics will lack clarity and become loud and "boomy."

4. Finishing materials should be evaluated for their effect on the variety of frequencies produced within the music environment. Treatments should be specifically designed to cover this broad range of needs and acoustic materials used that are rated by the frequencies they are designed to affect.

Absorption and Diffusion The ideal music suite has the proper combination of absorption and diffusion to control excessive loudness and scatter sound throughout the environment, producing an accurate and balanced acoustical result.

Sound absorption can generally be defined as the reduction of sound energy that occurs when sound comes into contact with surfaces and materials. When sound strikes a hard, dense surface, such as a gymnasium floor, there is nominal absorption. When the surface is that of a thick, fibrous material, such as a theatre's curtained walls and acoustical panels, a great deal of sound energy can be absorbed and less sound reflected back toward its origin.

Sound diffusion can generally be defined as the scattering and redirection of sound resulting from acoustically reflective surfaces. Diffusion of musical sound is necessary so that it can be clearly heard from all points in a space. Extravagant ornamentation, such as columns and plaster work in historic theatres, produces many angled, acoustically reflective surfaces that result in excellent diffusion.

Different music environments require varying degrees of absorption and diffusion, depending upon shape, volume, etc. A proper balance of absorption and diffusion is necessary to create

proper reverberation times that can give the instructor a more accurate account of student performance and progress. The following should be considered during the design process

Untreated room:

1. Parallel walls create flutter echo.
2. Carpet, drapes, and upholstery absorb higher frequencies only, leaving the remaining lower frequencies overpowering, reverberant, and indistinct.
3. Loudness is excessive and nearly impossible to control.

Treated with absorber panels only:

1. Panels absorb high and low frequencies, reducing flutter echos and "boomy" sound.
2. Loudness is reduced, but overall acoustics are unbalanced.
3. Lack of diffuser panels severely limits sound reflection, adversely affecting communication within the ensemble.

Treated with absorber and diffuser panels:

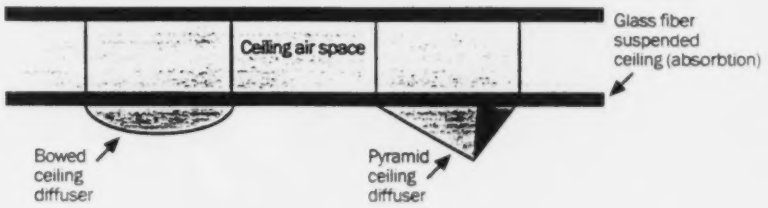
1. The ideal combination of absorber and diffuser panels creates an acoustically balanced environment.
2. Flutter echo, reverberation, and "boomy" sounds are eliminated.
3. Loudness is controlled and balanced over the full audible range.
4. Performers can hear themselves and others.
5. Instructors hear balance with accuracy.

Passive Treatments Each surface in the music environment has a direct effect on how sound and acoustics work within the environment. The following treatments affect the acoustics of a room.

Ceiling finishes:

1. The ceiling is the largest area available for acoustic treatment.
2. Suspended ceiling treatments create air space needed to trap low-frequency sounds.
3. Suspended fiberglass panels provide the broad-range frequency asorption required for the typical band room and are twice as effective as typical mineral board ceilings. Diffuser panels can also be hung from the suspended ceiling grid.
4. Absorptive fiberglass, which is often identical in appearance to mineral board, should be specified.

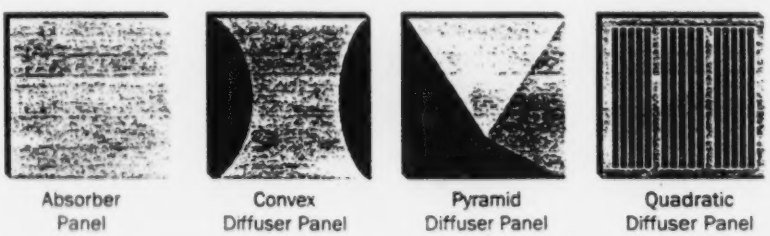
5. Ceiling height should be measured from floor to suspended ceiling--not from risers.



Courtesy Wenger Corporation

Wall finishes:

1. Walls should be treated with a combination of absorber and diffuser panels.
2. Absorption panels on the lower wall behind percussion and lower brass sections will reduce loudness significantly.
3. The thicker the fiberglass treatment, the lower the frequency it can absorb. Three inches is a good minimum thickness for fiberglass for effective wide-range absorption of musical frequencies.
4. Reactive diffusers are available in a variety of shapes and sizes.



Courtesy Wenger Corporation

Floor finishes:

1. Carpeting absorbs high-frequency sounds. If carpet must be used, select thin industrial-grade carpet that is acoustically nearly transparent.
2. Excessive use of thin carpet willl reduce the ability to hear high-frequency sounds.
3. Most musicians prefer wood or other hard-finish floors because: (a) bare floors are easier to clean; (b) most performance areas are hard-surfaced; and (c) emptied water keys from brass instruments can make carpet smell stale and musty (air quality concern).

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Active Treatments: Active acoustics utilizes electro-acoustic elements--advanced microphones, speakers, and digital signal processing (DSP)--to positively treat acoustics. It is important to treat a space with effective passive treatments before active acoustics are installed. The environment should already have good sound isolation and adequate volume.

1. The active acoustics system uses passive absorber panels as its foundation.
2. Speakers replace diffuser panels to provide improved diffusion throughout the environment.
3. Digital signal processing (DSP) can change the acoustics in a space with the push of a button.
4. Acoustics in the space can be switched to simulate center stage of an auditorium, a recital hall, or any other environment. This allows instructors and students the flexibility to practice in environments that simulate the acoustics of the space in which they most frequently perform.

STORAGE

Storage needs are great and varied, and the floor plan should provide adequate storage for instruments, robes, uniforms, and music. Because most music equipment is fragile, expensive, and prone to vandalism, storage spaces should be durable and secured. During the design process, it is vital to address types of storage, safe traffic flow, and security.

Garment:

1. Secure, ventilated storage will prevent mildew and protect robes, uniforms, and other garments.
2. Storage of garments on single-line rolling racks allows garments to be removed from the storage room when more direct student access is required.

GARMENT STORAGE GUIDELINES

TYPE OF STORAGE	GARMENT QUANTITY	FLOOR SPACE
Choral robes	100 robes	2.5 sq. ft. per garment or 150-250 square feet* (2-4 inches per hanging robe)
Band uniforms	100 uniforms	3 sq. ft. per garment or 300-400 square feet* (4-5 inches per hanging uniform)

*Square footage requirements given are for a 60-80 member program.

Courtesy Wenger Corporation

Instrument:

1. Musical instrument storage should be large enough to also hold the student's books, outerwear, and other personal effects.

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2. Consistent year-round temperature and humidity levels are necessary to prevent damage to instruments. Such damage may include cracking, loosening of glue joints, and corrosion.
3. Temperature should remain constant between 65 and 72 degrees Fahrenheit and relative humidity that remains between 35 and 50 percent is desirable.
4. Storage cabinets with solid doors acoustically reduce cubic volume and occupy wall space needed for acoustic treatment, and should be located outside of music rooms.
5. Cabinets located within music rooms should have grille doors, with open cabinet interiors that act as diffuser surfaces to eliminate flutter echo. Grille doors also allow visual inspection and enhance ventilation.

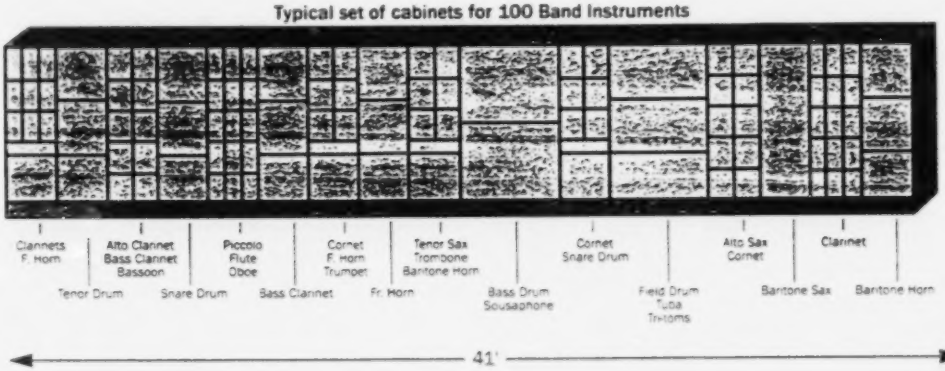
Average distribution of band instruments

INSTRUMENT	PERCENT
piccolo	1%
oboe	3%
flute	12%
clarinet	24%
alto clarinet	3%
bass clarinet	3%
bassoon	4%
alto sax	5%
tenor sax	1%
baritone sax	1%
cornet/trumpet	14%
french horn	6%
baritone horn	4%
trombone	6%
tuba	4%
snare drum	6%
tenor drum	2%
base drum	1%
	100%

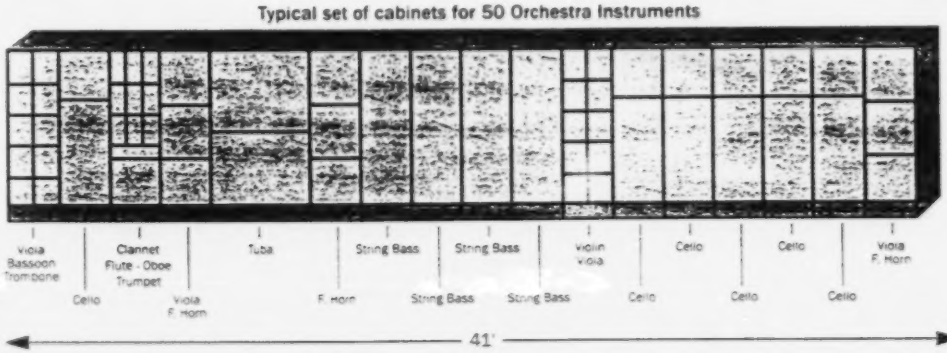
Average distribution of orchestra instruments

INSTRUMENT	PERCENT
violin	25%
viola	19%
cello	14%
double bass	8%
flute	3%
clarinet	3%
trumpet	6%
trombone	4%
tuba	1%
french horn	11%
oboe	3%
bassoon	3%
	100%

Typical set of cabinets for 100 Band Instruments



Typical set of cabinets for 50 Orchestra Instruments



INSTRUMENT STORAGE GUIDELINES		
TYPE OF STORAGE	ACCOMMODATES	FLOOR SPACE
Instrument	150-200 instruments	4 sq. ft. per instrument or 600-800 square feet*

*Square footage requirements given are for a 60-80 member program.

Courtesy Wenger Corporation

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Music library:

1. Music storage should protect music from damage but be convenient, so music may be located quickly and quietly.
2. Sheet music storage should be in or near the instructor's office to control access.
3. Pull-out storage units work best on wood, tile, or other hard-finish surfaces.
4. Provide an adjacent area where music can be collected, sorted, and distributed.
5. Storage systems should be placed in the corners of the storage room to maximize space utilization. High-density systems offer more shelves than traditional filing cabinets and can be placed side by side and pulled out individually as needed.

SHEET MUSIC STORAGE GUIDELINES

NUMBER OF TITLES	HIGH DENSITY STORAGE SYSTEMS FLOOR AREA REQUIRED	STANDARD FILE CABINETS FLOOR AREA REQUIRED
500	35 sq. ft.	65 sq. ft.
1,000	70 sq. ft.	130 sq. ft.
2,000	140 sq. ft.	260 sq. ft.
3,000	210 sq. ft.	390 sq. ft.

Courtesy Wenger Corporation

Other:

1. Space should be provided in the music room for portable storage of music folios, small percussion instruments, stereo recording equipment, and computers.
2. Portable storage units allow for easy movement of instruments and equipment between spaces.

TRAFFIC FLOW

1. Storage areas are prone to congestion, which can waste time and promote undesirable behavior. A plan should promote smooth flow of student traffic.
2. Robe and uniform storage rooms provide excellent sound isolation when used as buffer zones between instructional spaces.
3. Place instrument storage in the music room in proximity to the related instrument sections.
4. If instruments are to be stored in a separate room, oversized entry doors should be placed at each end of the room to improve safe traffic flow during periods of peak congestion.
5. Allow a minimum of 3'-0" between cabinets and opposing walls and 6'-0" between rows of opposing cabinets to relieve congestion and reduce the possibility of damage to instruments. Increase these minimums if the room has only one door.
6. Avoid placing double-door cabinets next to one another to prevent contact between doors. This will also expedite the removal of instruments by ensuring that students don't have to wait for other students accessing an adjacent cabinet.

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SECURITY

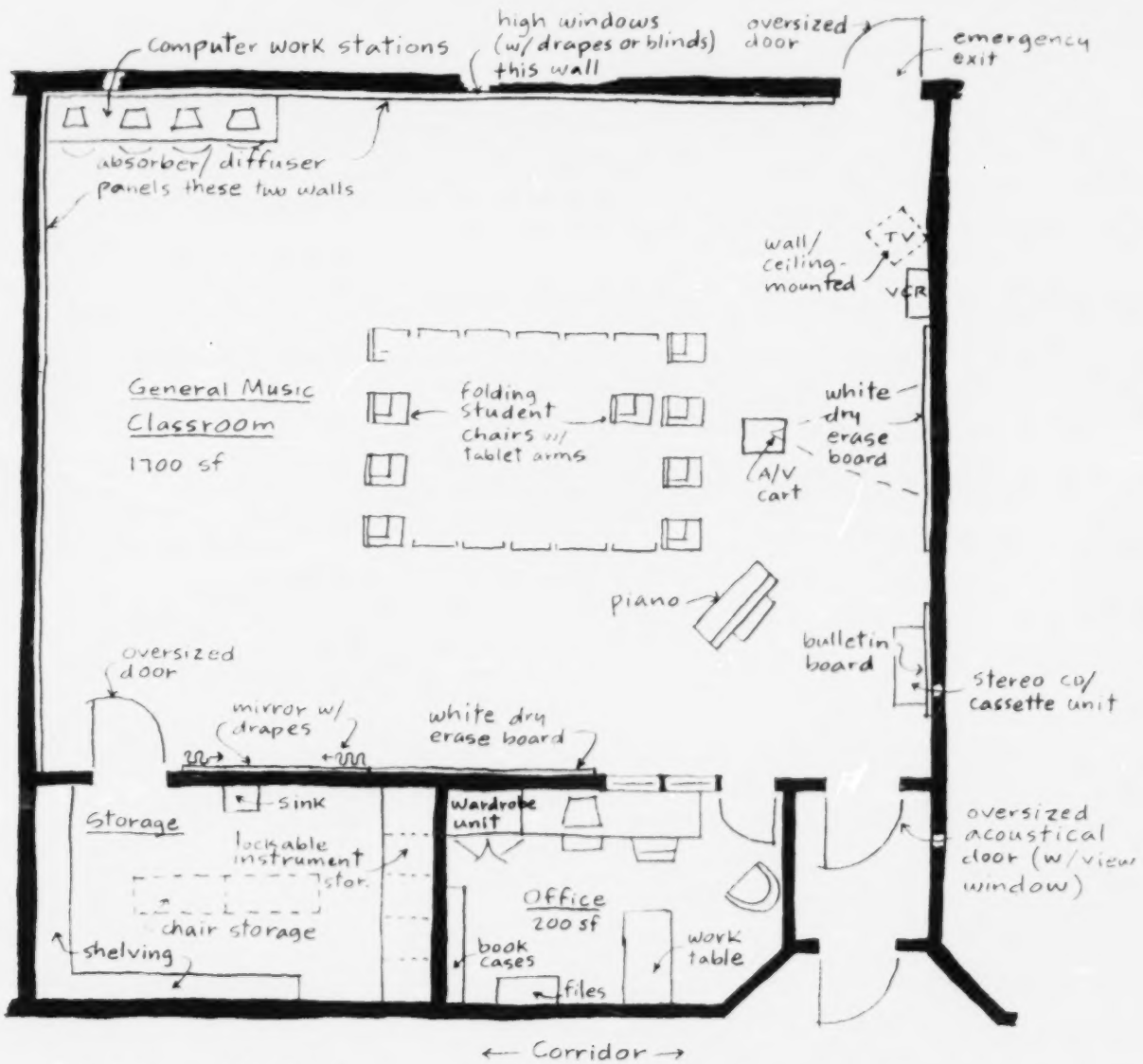
1. For maximum security, plan for separate lockable storage rooms for each program area and provide lockable cabinets inside.
2. Motion detectors can help to prevent unauthorized entry and vandalism.
3. Storage rooms should be located where they can be observed from the office(s).
4. The suite should be secured from the remainder of the school for after-hours and weekend activities.

EQUIPMENT

1. Proper equipment in the music suite will help to ensure a successful, functional, and durable music environment and should be considered a long-term investment.
2. Chairs designed specifically for music posture help the student produce better tone and thus become better musicians.
3. Chairs should be stackable for easy storage. Chair carts make it easier to transport chairs between classroom and performance areas.
4. Music stands should be sturdy and designed to withstand heavy use. Stand carts make it easier to move stands between classroom and performance areas.
5. Portable risers permit greater adaptability to program changes and don't reduce cubic volume or adversely affect acoustics like concrete risers. Flat floors facilitate handicapped accessibility and offer the greatest space flexibility.
6. Flexibility should be a key to equipment selection. Products should adapt easily to changes in the music environment.

GENERAL MUSIC:
Sample Floor Plan

Note: This sample plan is representative of that recommended for a general music program typically found in a magnet or performing arts middle school. Essential elements of the plan are similar and representative of those typically found in an elementary school program, with ancillary support areas being those described in the text.



MIDDLE SCHOOL
GENERAL MUSIC CLASSROOM

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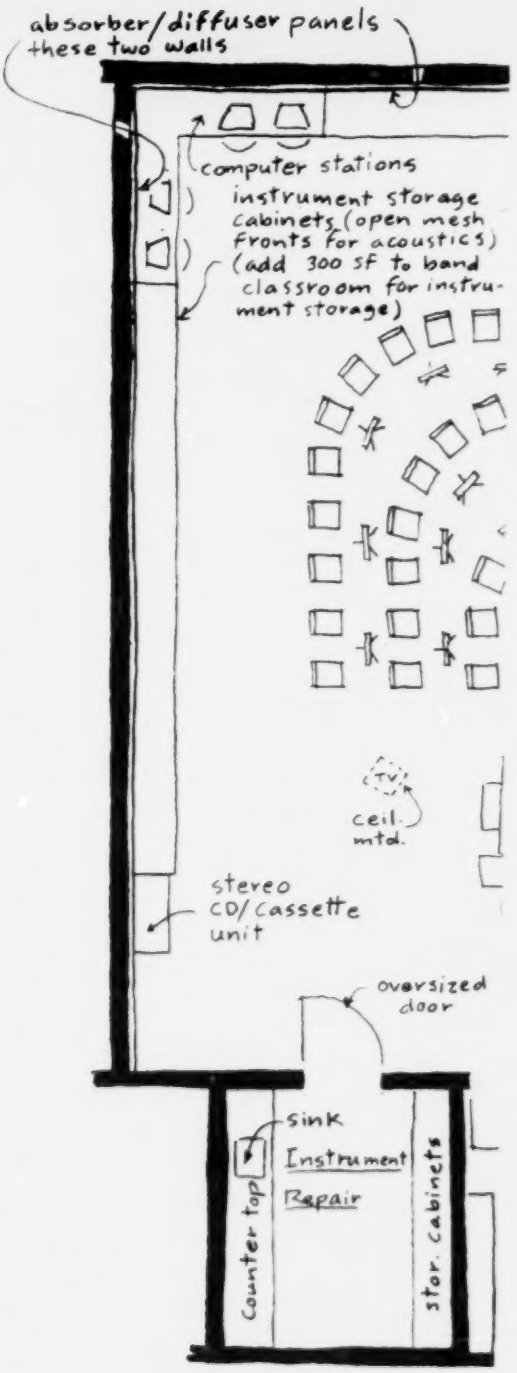
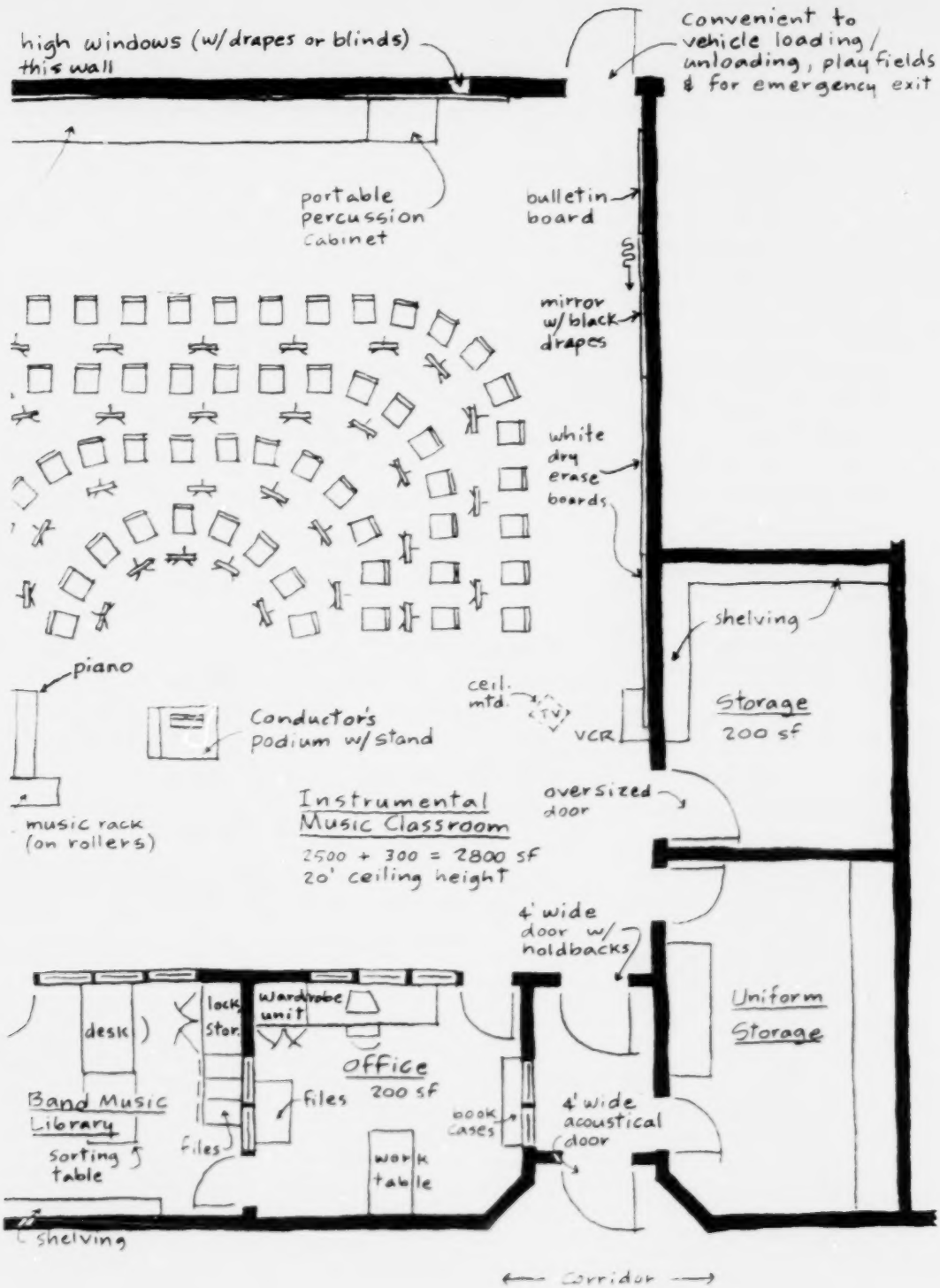
INSTRUMENTAL MUSIC:
Sample Floor Plan

Note: This sample plan is representative of that recommended for an instrumental music program typically found in a magnet or performing arts middle school. Essential elements of the plan are similar for all schools, with ancillary support areas being those described in the text.





MIDDLE SCHOOL INSTRUMENTAL MUSIC CLASSROOM

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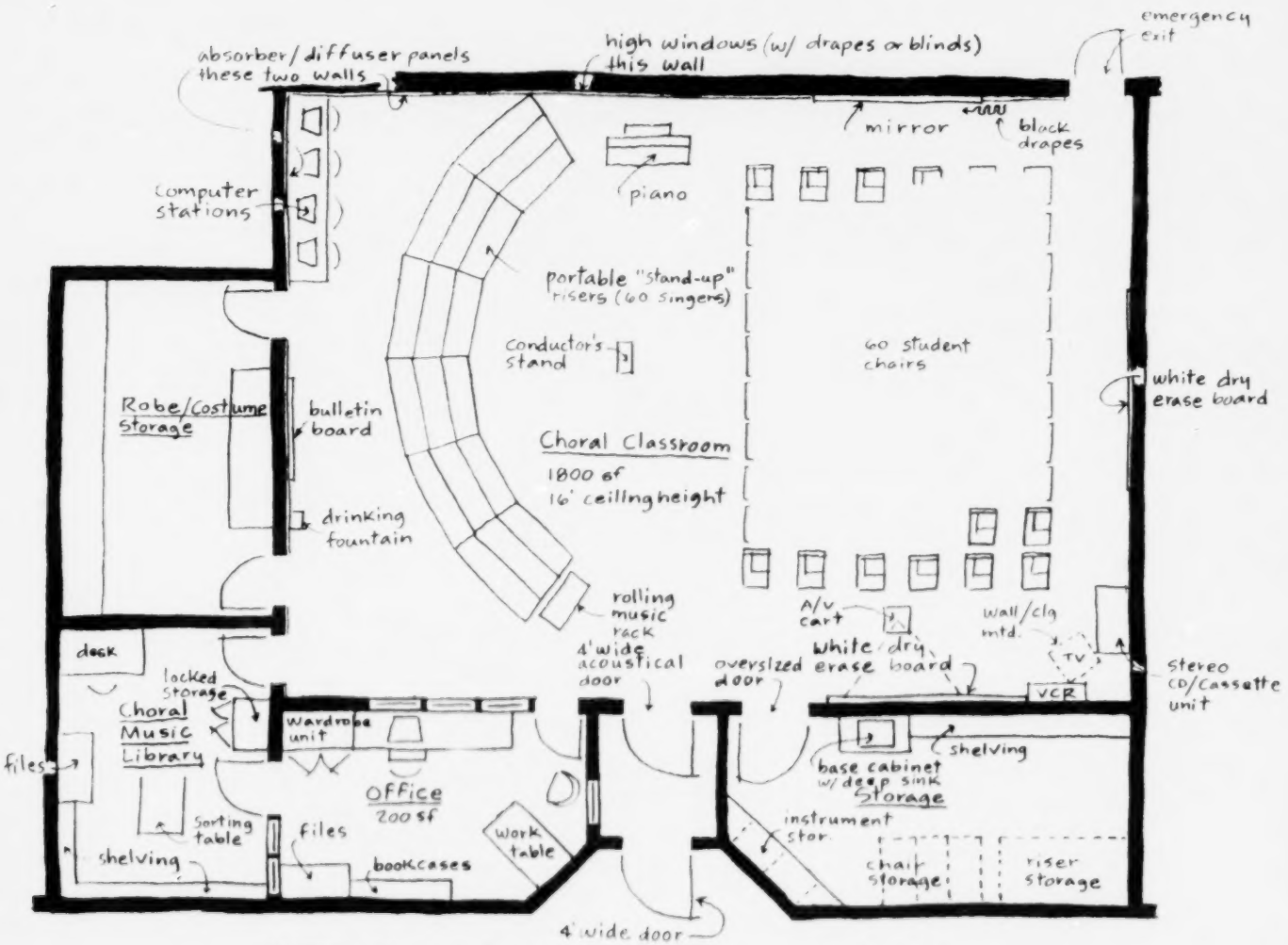
CHORAL MUSIC:
Sample Floor Plan

Note: This sample plan is representative of that recommended for a choral music program typically found in a magnet or performing arts middle school. Essential elements of the plan are similar for all schools, with ancillary support areas being those described in the text.



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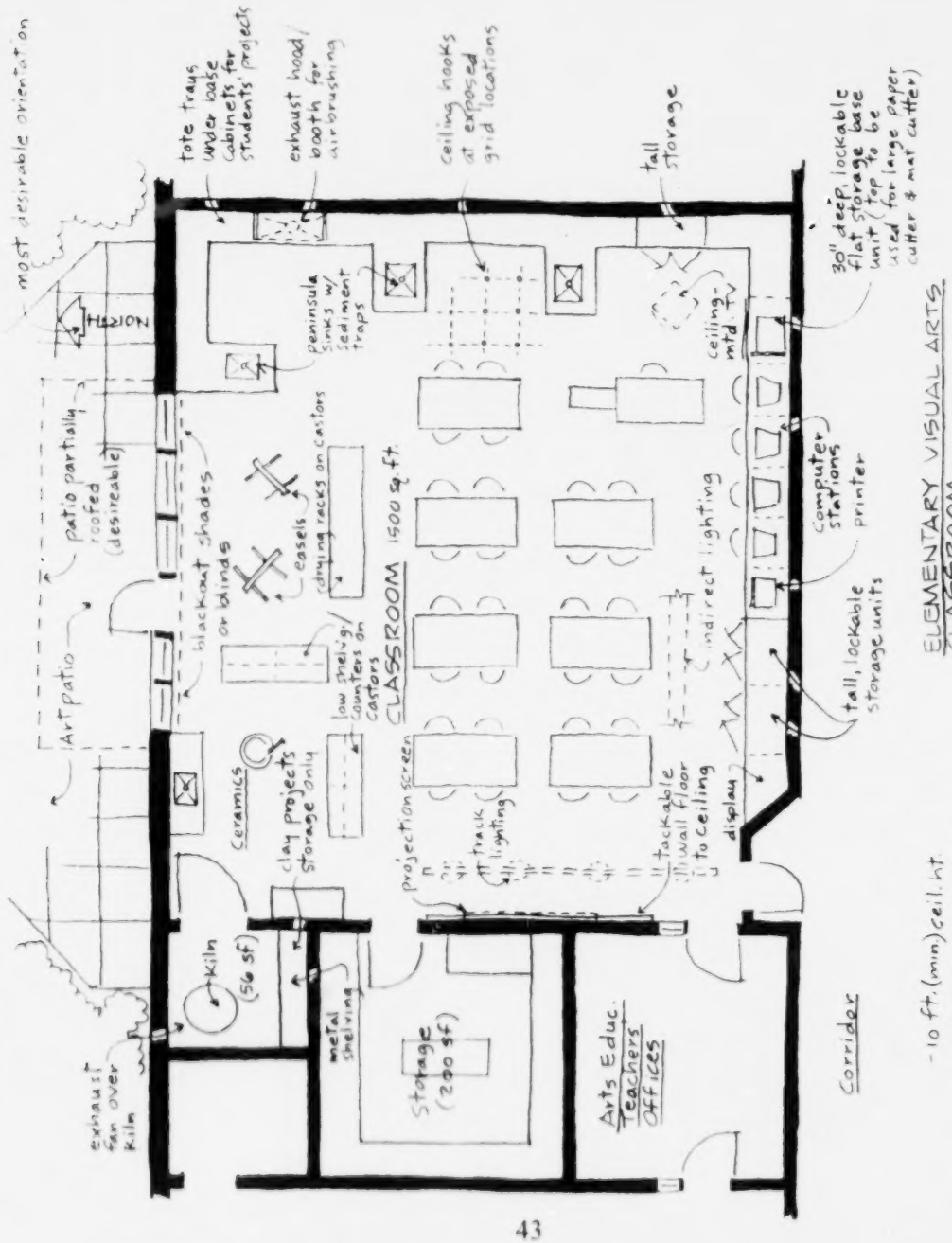
VISUAL ARTS:
Sample Floor Plan

Note: This sample plan is representative of that recommended for a visual arts program typically found in a magnet or performing arts elementary school. Essential elements of the plan are similar for all schools, with ancillary support areas being those described in the text.



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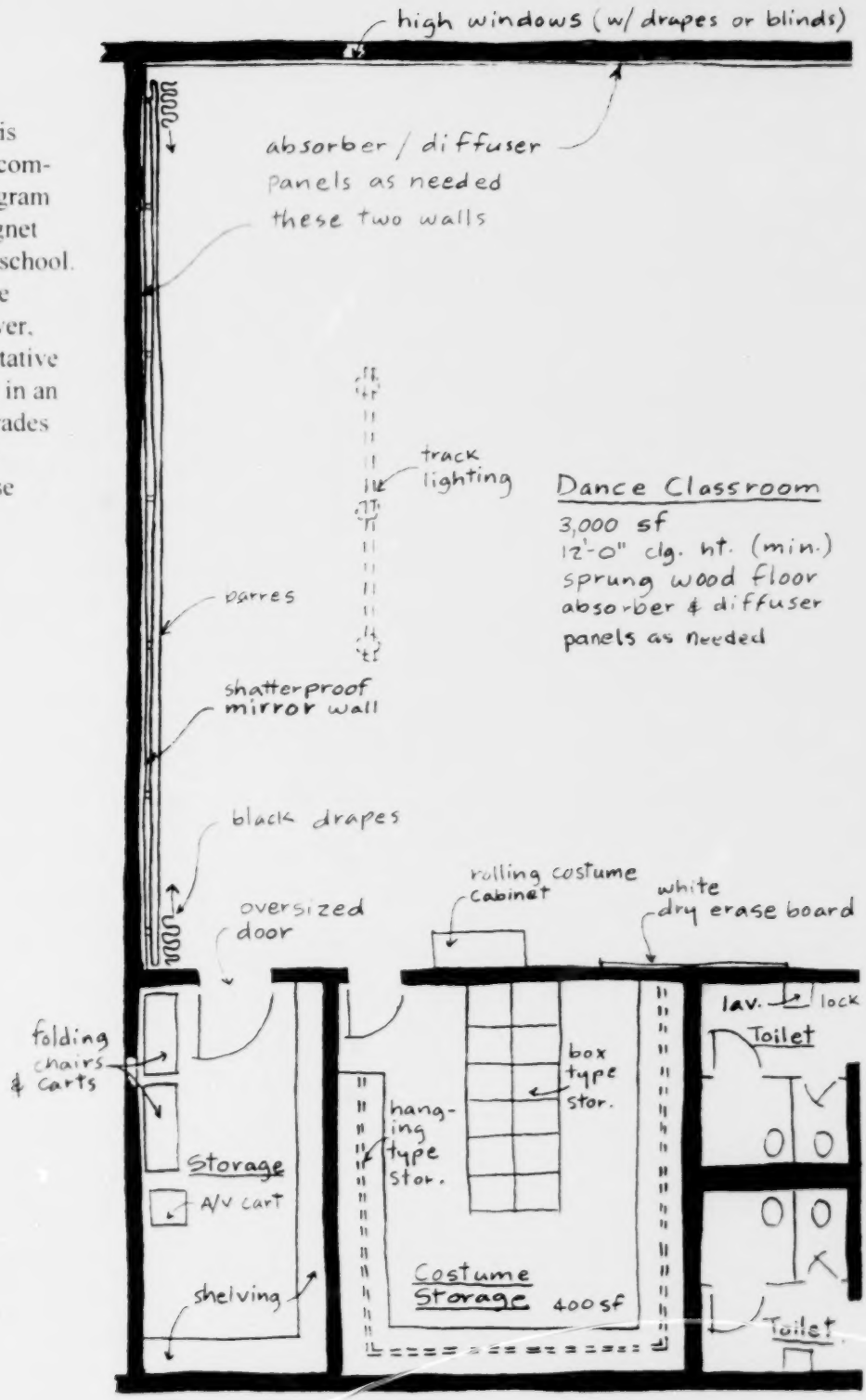
DANCE:
Sample Floor Plan

Note: This sample plan is representative of that recommended for a dance program typically found in a magnet or performing arts high school. Essential elements of the classroom per se, however, are similar and representative of those typically found in an elementary or middle grades program, with ancillary support areas being those described in the text.



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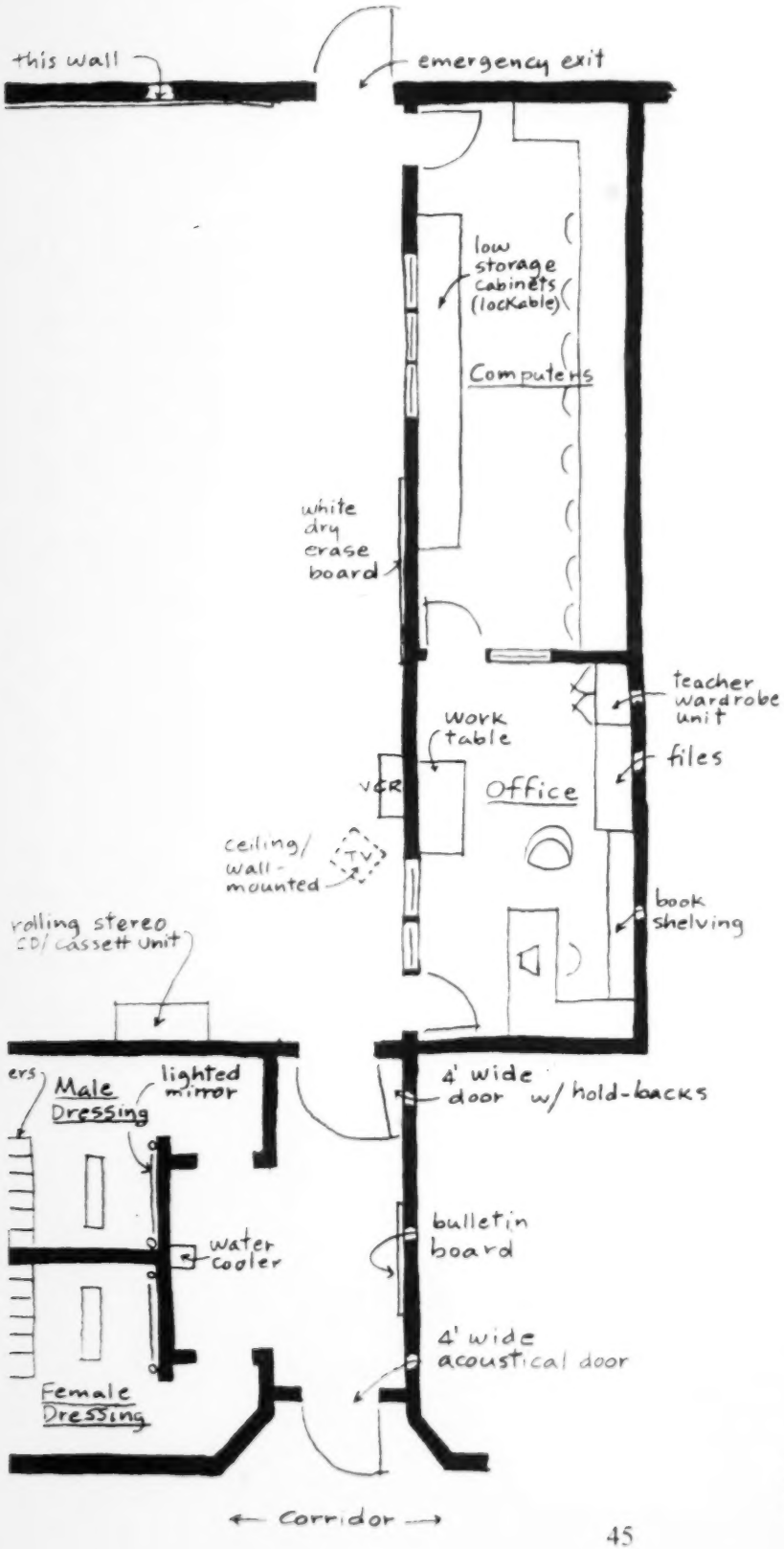

HIGH SCHOOL
DANCE CLASSROOM

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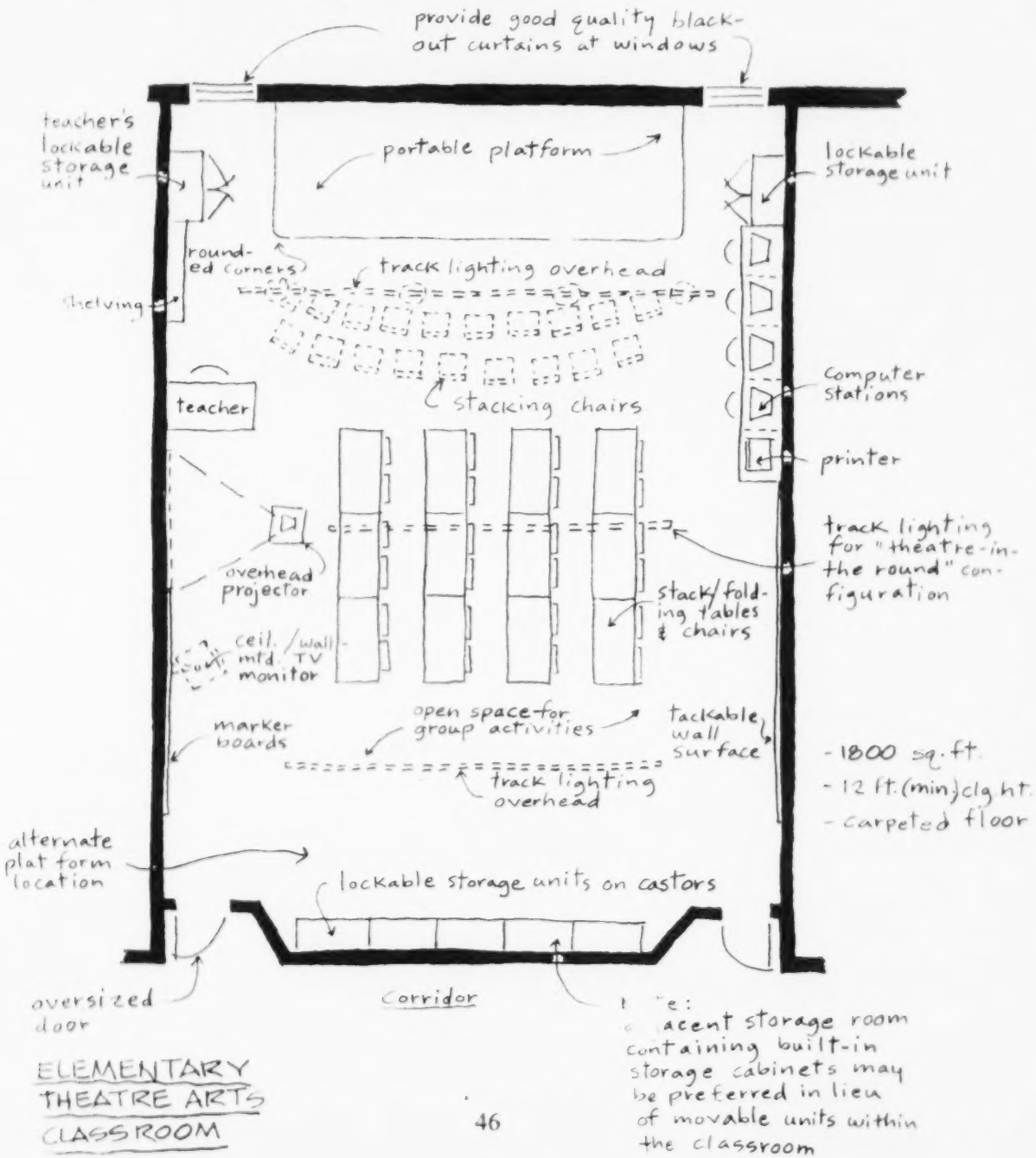
THEATRE ARTS:
Sample Floor Plan

Note: This sample plan is representative of that recommended for a theatre arts program typically found in a magnet or performing arts middle school. Essential elements of the plan are similar for all schools, with ancillary support areas being those described in the text.



ELEMENTARY THEATRE ARTS CLASSROOM

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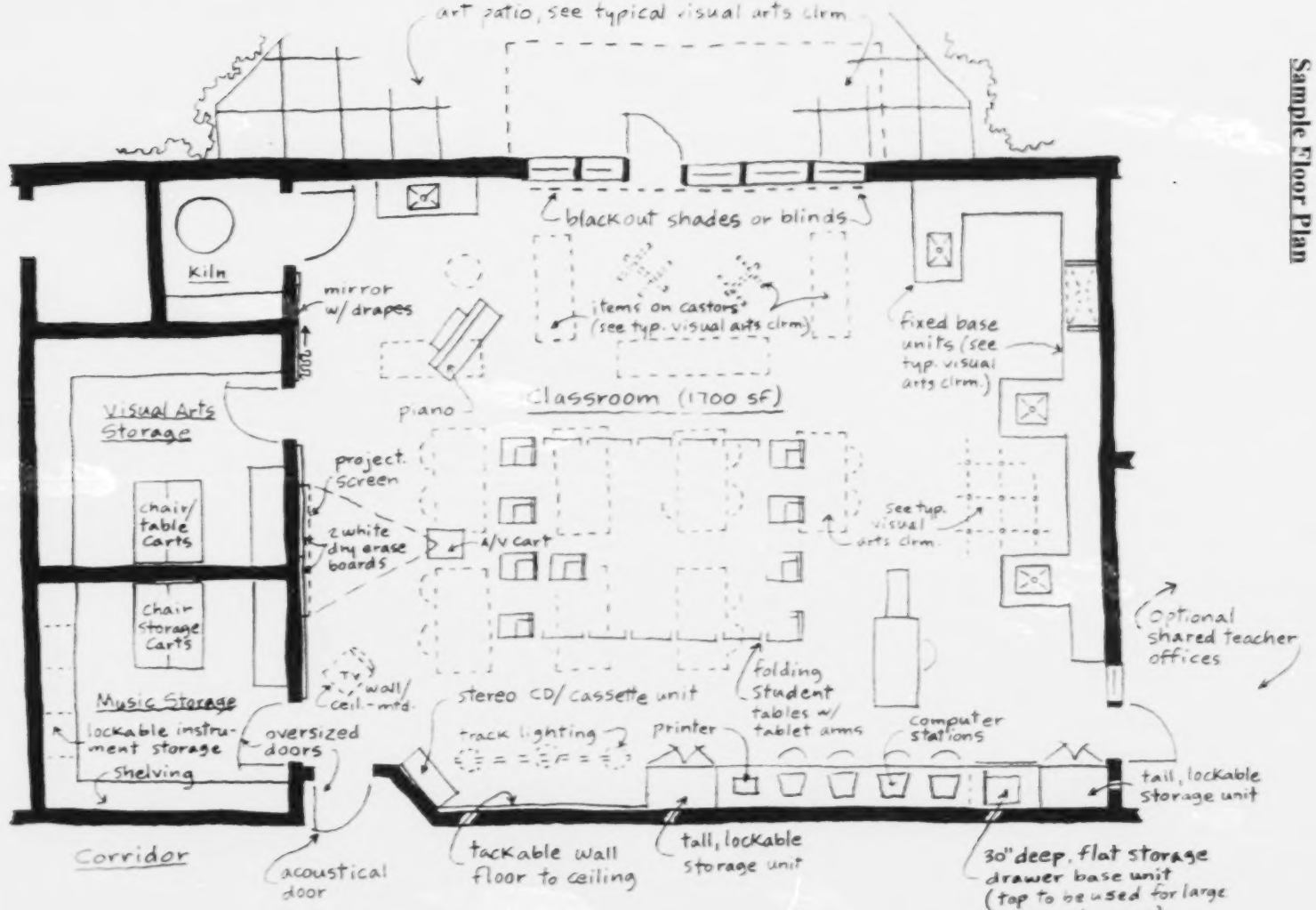
SMALL SCHOOL SAMPLE PLANS

Renewed interest in the potential benefits of smaller schools has emerged pursuant to studies on school safety and order and student achievement. The facilities recommended in this publication present best-case scenarios that accommodate the *North Carolina Standard Course of Study* in its most comprehensive form and are consistent with current State Board of Education school size guidelines*.

Designing smaller schools entails more than proportionately reducing the size of various components within a facility. Requisite administrative and support elements require certain minimum amounts of space in order to function, regardless of the size of the instructional area. Likewise, some instructional spaces may be difficult to down-size (other than the *quantity* of regular classrooms) without compromising the quality of curriculum offerings.

A major consideration in electing smaller schools may be establishing a reasonable balance between curriculum and facility issues--i.e. what are the boundaries of where program quality and facility size can meet to the best advantage of the student. Sample combination facilities for teaching the arts to a smaller student population in a smaller physical setting can be found on the following pages.

*(Current guidelines reflect effective and efficient school sizes and are predicated on curriculum and program offerings and economy of facility construction, operation, and maintenance.)



SMALL SCHOOL:
Sample Floor Plan

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SHARED ARTS EDUCATION CLASSROOMS
for
SMALL ELEMENTARY SCHOOLS
(Visual Arts / Music)

floor: vinyl composition tile
wall: absorber/diffuser panels as needed
ceiling: suspended absorptive fiberglass panels
ceiling height: 10 ft. (min.)

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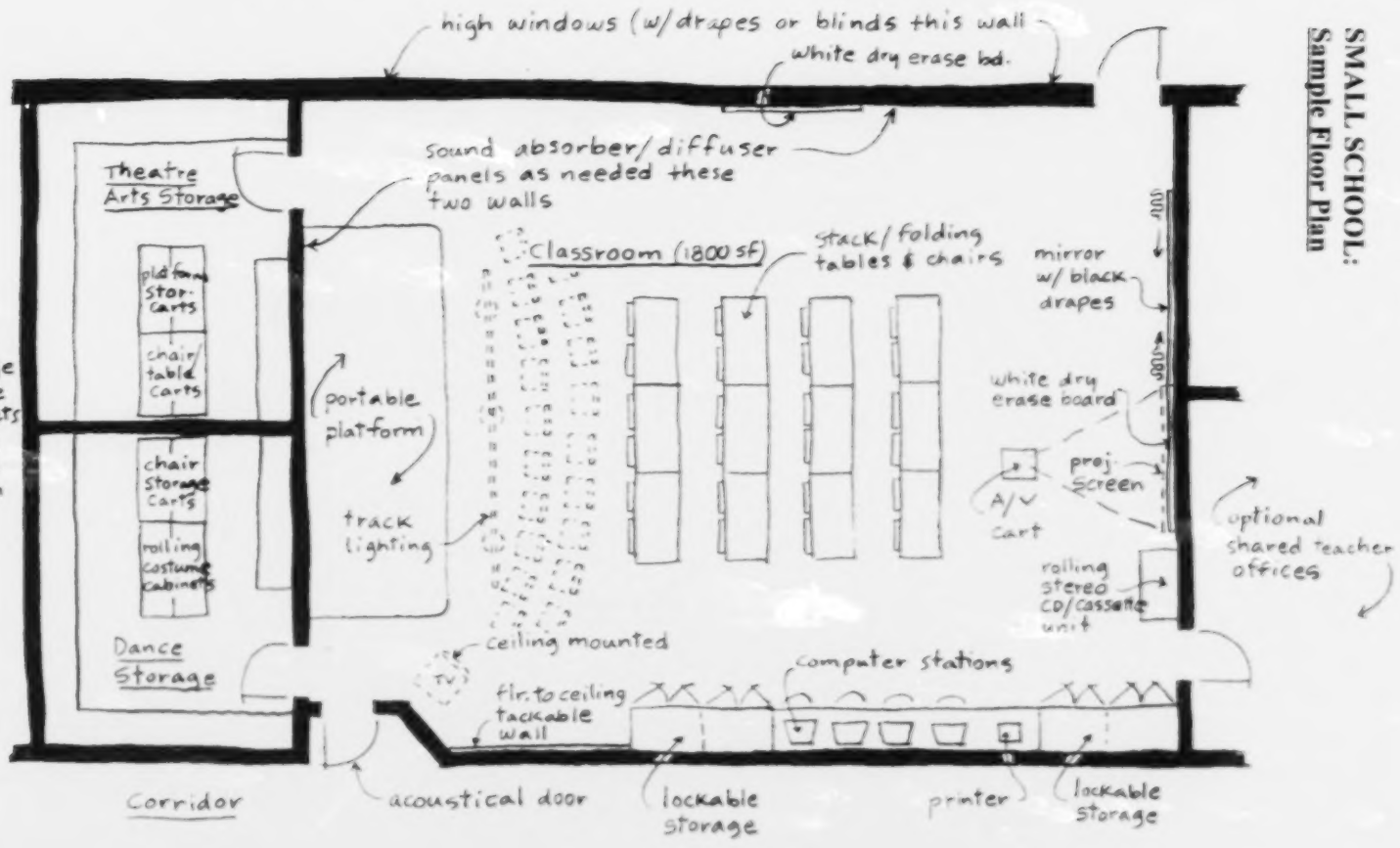

Note:
In lieu of separate storage rooms, movable storage cabinets & carts may be located within the classroom if desired.

SMALL SCHOOL: Sample Floor Plan

SHARED ARTS EDUCATION CLASSROOMS for SMALL ELEMENTARY SCHOOLS

(Theatre Arts/Dance)

floor: sprung or resilient wood
ceiling height: 12' min.

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ADDITIONAL RESOURCES

Design Standards for School Art Facilities, 1994, National Arts Education Association, Reston, VA.

Facilities for Arts Education, 1991, North Carolina Department of Public Instruction, Raleigh, NC.

Music Facilities: Building, Equipping, and Renovating, Geerdes, Harold P., Music Educators National Conference, 1987, Reston, VA.

North Carolina Public Schools Facilities Guidelines, 1999, North Carolina Department of Public Instruction, Raleigh, NC.

Opportunity-to-Learn Standards for Arts Education, 1995, Consortium of National Arts Education Associations, National Dance Association, Reston, VA.

Planning Guide for Secondary School Music Facilities, 1997, Wenger Corporation, Owatonna, MN.

Teacher Handbook: Arts Education K-12, 1995, North Carolina Department of Public Instruction, Raleigh, NC.